

**HEALTH RELATED QUALITY OF LIFE IN SURVIVORS OF ACUTE  
RESPIRATORY ILLNESS WHO REQUIRED INVASIVE RESPIRATORY  
SUPPORT IN A TERTIARY PAEDIATRIC ICU - A PROSPECTIVE  
OBSERVATIONAL STUDY**

**ABSTRACT**

**INTRODUCTION :**

Owing to medical and technological advances in paediatric intensive care, there is increased survival of critically ill children. Unlike in adult medical care, many children surviving intensive care have the prospect of a full life with good quality. Though there are many literature available on Quality of life of adult patients, there is paucity of studies in assessing quality of life after discharge in children with acute respiratory illness admitted in pediatric intensive care, especially in Indian setting. Hence we conducted this study.

**AIM OF THE STUDY:**

To assess long term health related quality of life in all PICU survivors with acute respiratory illness requiring invasive respiratory support, three to eight years after discharge

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## **METHODOLOGY:**

All premorbidly well children between 1month to 15years of age who were ventilated for more than 48 hours for acute respiratory illness between March 2008- February 2014 and who were survived and discharged were included in our study. Neonates, children with acute neurological dysfunction, premorbidly unwell children, readmission to PICU were excluded. Data was collected from medical records. Those who were non contactable were written a postal letter. Quality of life assessment was done with the help of the Health Utility Index 2 which has 6 domains; sensation, mobility, emotion, cognition, self care and pain. Functioning within each attribute is represented by four or five levels. The assessment was done either by telephone questionnaire or by objective assessment in PICU office/Out patient department(OPD) by using HUI2 index. By using this,the outcome is classified as NORMAL(Score>0.99),FAIR(0.89-0.99) and POOR(Score<0.89).

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## **RESULTS**

In our study we had total 259 children who were admitted with acute respiratory illness requiring invasive ventilation in PICU for more than 48 hours during our study period. Out of these, 67 children (26%) died during PICU stay due to various complications and 46 (18%) were discharged against medical advice. Among 146 children, we were able to contact 66 children and the remaining 74 children could not be contacted through telephone or postal service. In the study group, six children died after discharge due to various causes. HUI2 questionnaire details were obtained either through personal interview(n=24) or by telephonic interview (n=42).

HUI2 assesment was done for 66 children (Mean age  $7.8 \pm 2.6$  years). Mean HUI2 score was  $0.94 \pm 0.062$ . Majority of children are having good quality of life(84%) and 16% having poor quality of life who were affected in more than one domain. Of these 66 children, only one child was having learning disability and was affected badly in 4 domains(Score of 0.69) of quality of life. He needs spectacles to see and can walk with some limitation and often anxious and studies less compared to peer groups.

Most common affected domain in our study group is 'Cognition'. 23(35%) children are able to learn and remember school work less than their peer groups at school otherwise there were normal in all other domains. This is based on their parents

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perspective. Second most common affected domain is 'Emotion'. 12(19%) children in our study group(66) are occasionally irritable, angry, depressed, anxious due to various reasons. Third most common affected domain is 'Sensation'. Eleven(17%) children among our study group required either spectacles or hearing aid. In the 'Pain' domain, only 7 children (11%) out of 66 has occasional pain and discomfort. In the 'selfcare' domain, only 5 children (8%) out of 66 children are affected. These children have some difficulty to handle their day to day activities. Least commonly affected domain is 'Mobility'(1.5%) where only one child was affected who needs some assistance while walking .

In our study, duration of PICU stay, complications of ventilation(VAP, Pneumothorax, Pneumomediastinum) and multiorgan dysfunction(ARF,ALF,DIC-9) had influence on the long term outcome but it is not statistically significant (P value 0.128, 0.206 and 0.638 respectively). This may be due to the decrease in effect of acute illness in long term quality of life. In our study there was no correlation noted between maternal and paternal education and quality of life.

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## **CONCLUSION**

Majority of PICU survivors(84%) have a good long term Quality of life (HUI mean score 0.94+/0.06). Even though, factors (Duration of PICU stay, complications of ventilation and multiorgan dysfunction) influencing long term quality of life were present more in the Poor outcome group, they are not statistically significant. This may be due to the decrease in effect of acute illness in long term quality of life.

## **KEY WORDS**

Health utility index 2, Quality of life, PICU